

A SYNOPSIS OF THE STURGEONS (ACIPENSERIDÆ) OF JAPAN.

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Two species of sturgeon (*Acipenser*) are known to inhabit the waters of Japan. In addition to these, a few other species have been recorded from rivers of Manchuria and of China. These may be found to enter streams of Saghalin or of Hokkaido.

The following is an analysis of the species known in Japanese waters:

Genus ACIPENSER Linnæus.

- a. Dorsal fin very long, of more than 60 rays; anal rays about 40; dorsal plates 11; lateral plates 32; skin between series of scales nearly smooth; anal below posterior part of dorsal; snout rather short *kikuchii*
aa. Dorsal fin moderate, of 35 to 40 rays; anal rays about 30; dorsal plates 7 or 8, lateral plates 34; skin between series of shields with small stellate plates; snout rather sharp *mikadoi*

ACIPENSER KIKUCHII Jordan and Snyder.

Acipenser kikuchii JORDAN and SNYDER, Journ. Coll. Sci. Tokyo, XV, 1901, p. 302, pl. xv, figs. 1, 2; Misaki, Sagami Bay.

Head, $4\frac{1}{3}$ in length; depth, 7. Snout, $2\frac{2}{3}$ in head. Dorsal plates, 11; lateral, 32; ventral, 11. Dorsal rays, III, 63; anal, III, 37. Head longitudinally concave above. Snout shortish, rather sharp. Dorsal plates large, rugose, without distinct spines; lateral plates each with a spine in front, those below smooth. A large rugose plate behind dorsal and behind anal. No bony plates on body except the five series, and a few small ones between the large anterior ones of dorsal series, the skin between the rows of plates soft and smooth. Opercle rugose; cheeks with fine stellate prickles. Height of dorsal, $2\frac{2}{3}$ times in head; insertion of anal below posterior part of dorsal; pectoral, $1\frac{3}{4}$ in head; upper lobe of caudal, $1\frac{1}{2}$ times head.

Of this species but one specimen is known. This is a mounted example, 1.80 meters long, in the Museum of the Imperial University of Tokyo. It was taken in a net in the open sea off Misaki, in Sagami

Bay. It is distinguished from most other sturgeons by the very long dorsal fin.

(Named for Prof. Dairoku Kikuchi, late president of the Imperial University of Tokyo.)

ACIPENSER MIKADOI Hilgendorf.

CHOZAME (CHIEF SHARK).

Acipenser mikadoi HILGENDORF, Sitz. Naturf. Freunde Berlin, 1901, p. 98: Tokyo market, doubtless from Hokkaido.—JORDAN and SNYDER, Journ. Coll. Sci. Tokyo, 1901, p. 303: Ishikari R., Teshio, Mikawa.—SCHMIDT, Pisc. Mar. Orient, 1904, p. 284: Hakodate, etc.

Head, $3\frac{3}{4}$ to $3\frac{1}{2}$ in length; depth, $6\frac{1}{2}$ to 7. Snout, 2 to $2\frac{1}{10}$ in head. Dorsal plates, 7 or 8; lateral, $3\pm$; ventral, 9. Dorsal rays, IV, 31 to IV, 36; anal rays, III, 25 to III, 28.

Top of head, bony; snout, short, rather sharp; cheeks with rough plates; opercle, rugose. Sides above, between series of large plates, with smaller plates mostly stellate, 14 of these forming an irregular row below the dorsal series; plates, well keeled, with radiating striæ, rather than rugose; 4 to 6 plates behind dorsal; 2 to 4 behind anal.

Pectoral, $\frac{2}{3}$ in head; height of dorsal, $3\frac{1}{3}$; upper lobe of caudal, $1\frac{1}{5}$ in head.

Described from three examples in the Imperial Museum of Tokyo, each about $1\frac{1}{3}$ meters in length, the first from the Ishigari River, in Hokkaido, the others from streams in Teshio and Mikawa, all of these localities being in the island of Hokkaido. This is the common sturgeon of northern Japan, known as chozame or chief shark.

(Mikado, the emperor of Japan.)